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**PATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN THE APPLICATION OF
KAZUMA NIUME, ET AL

DOCKET NO.: KOGYO-10

SERIAL NO.: 09/889,395

EXAMINER: UNKNOWN

FILED: JULY 17, 2001

ART UNIT: UNKNOWN

TITLE: COATING SOLUTION FOR FORMING TRANSPARENT CONDUCTIVE TIN
OXIDE FILM, METHOD FOR PRODUCING TRANSPARENT CONDUCTIVE TIN
OXIDE FILM, AND TRANSPARENT CONDUCTIVE TIN OXIDE FILM

WILMINGTON, DE

DATE: JANUARY 14, 2002

**SUPPLEMENTAL
INFORMATION DISCLOSURE STATEMENT**

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TC 1700

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Sir:

In compliance with the applicants' duty of disclosure under 37 CFR 1.56 (c) and the requirements of 37 CFR 1.97 and 1.98(3)(ii), and to aid in the search and examination of the above identified application, the applicants note and enclose a copy of an English abstract of Japanese Patent Application Laying-open No. 62-278705. The abstract was not available at the time of filing the July 17, 2001 Information Disclosure Statement.

Respectfully submitted,


Brian A. Gomez

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BAGtjw
Enclosure

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ABSTRACTS

Japanese Patent LAID-OPEN 62-278705

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[Application]: Published Dec 3, 1987; Filed, May 26, 1986; Application Number: 61-121650
[Assignee]: Taki Kagaku Co., Ltd.
[Problem] To provide a transparent conductive material comprised of a crystalline tin oxide-antimony sol, a coating method therefor, and an excellent transparent conducting material therefrom

[Composition] Transparent conducting material

[Claim 1] A transparent conductive material comprised of a crystalline tin oxide-antimony[oxide] sol wherein the antimony (Sb) and tin (Sn) are in a solid solution at an Sb/Sn molar ratio of not more than 0.3.

[Example 1]

A solution of stannic chloride and antimony trichloride at an Sb/Sn=0.1 was mixed with aq. ammonium bicarbonate solution--> Sb/Sn coprecipitated sol-> added ammonia-> autoclaved at 220°C->crystalline tin oxide-antimony oxide sol->coated on Pyrex glass->fired at 500°C->transparent conducting film. (e.g. Plane resistivity, 9.8×10^3 (illegible); $1.2 \mu\text{m}$; Light transmittance, 98%)

[Advantages]

The transparent conducting material, which is a highly polar sol, can be uniformly applied to glass substrate, ceramic material, etc., resulting in a compatible and uniform film. The sol, which comprises super fine particles of a molecularly dispersed solid solution of tin oxide and antimony oxide, gives (1) a highly transparent conducting film; and (2) high conductivity after baking. The conducting electrode can be used in solar cells, EL elements, liquid crystal elements, transparent switches etc.

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